

## ABSTRACT OF THE DISCLOSURE

In a direct conversion receiver with zero-frequency intermediate frequency (IF) signal, the DC offset and  $1/f$  noise of the IF signal is compensated by means of double-sampling. The first period of the doubling-sampling is a calibration phase, which stores the DC offset and the  $1/f$  noise. The second period is a signal flow phase during which the stored DC offset and  $1/f$  noise is connected in opposition with the IF signal to cancel the DC offset and  $1/f$  noise.

### Certificate of Mailing

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Box Issue Fee address above on the date indicated below.

Hung Chang LIN	(Depositor's name)
Hung Chang Lin	(Signature)
April 1, 2004	(Date)